

Some new developments in nonlinear programming

Philippe Toint
University of Namur (Belgium)
philippe.toint@fundp.ac.be

Nonlinear programming has seen a dramatic evolution in the past years, regarding both the efficiency and the reliability of the numerical methods available to solve practical problems. If an overview of all these developments is outside the scope of the talk, the speaker will nevertheless attempt to present a (biased) outline of some significant new ideas. In particular, the ideas of filters, of multilevel problems and of adaptive regularization will be described. A brief introduction to new methods in non-parametric discrete choice models will also be presented. Challenges and perspectives will finally be discussed.